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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/598,180
Filing Date: August 21, 2006
Appellant(s): BIALLAS ET AL.

Mary E. Golota
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed February 09, 2010 appealing from the Office action mailed August 6, 2009.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-26 are rejected and appealed by the Applicant.

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Status of Claimed Subject Matter

The examiner has no comment on the summary of the claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading

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“WITHDRAWN REJECTIONS.” New grounds of rejection (if any) are provided under the subheading “NEW GROUNDS OF REJECTION.”

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant’s brief.

(8) Evidence Relied Upon

5011881	FUJII ET AL.	04-1991
2004/0175572	HINTZE-BRUNING ET AL.	09-2004
2004/0208998	STEINGENER ET AL.	10-2004

(9) Grounds of Rejection

The following grounds of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.

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4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-8 and 10-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hintze-Bruning et al. (US 2004/0175572) in view of Fujii et al. (US 5011881).

Hintze-Bruning teaches a method for making a single-layer or multilayer color or effect film preparable by continuously applying a component amount of at least one basecoat material by means of directed application technique to a carrier, applying another layer of the same or a different basecoat by at least one application technique and drying or partly or fully curing the resulting layers, as required by claims 1, 10, 11, 13, 14, 16 and 25 (0022-0025). The films of the invention can be used for coating of substrates, as required by claim 17 (0001). Hintze-Bruning mentions that the preferred multilayer film is stretchable for forming a coating over three dimensional objections without significant change in color or effect, as required by claim 19 (0018). The film of the invention may also include a clearcoat that can be cured thermally, which is the same as heating, or with actinic radiation, as required by claims 1, 2 and 25 (0120—0121). The film can be used for automotive substrates, as required by claim 20 (0107). The carrier may be permanent or temporary (0065). A permanent carrier is preferably a polymer material and can comprise clear coat films, adhesion films or comparatively thick thermoformable carrier films, as required by claim 15 (0070).

Hintze-Bruning does not teach the specifically adjusting the temperature of the basecoat film before applying the clearcoat, specific residual volatile contents of the basecoat and clearcoat and specific drying rates, as required by claims 1-8 and 21-24.

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Fujii teaches a two coat coating method for coating a substrate comprising the steps of coating with a basecoat composition containing coloring pigment, applying a clearcoat to the cured or uncured coating and curing the clearcoat or the two coatings at the same time at a temperature of lower than about 120 degrees Celsius, as required by claims 1, 25 and 26 (abstract). The aqueous coating composition is dried in air or hot air until the water content of the coating is reduced to about 25% by weight of water or lower, as required by claims 1, 2, 5, 7, 21, 22 and 25-26 (col. 7, lines 14-27). A test piece was coated twice and allowed to stand for two minutes, dried in air at a temperature of 80 degrees C for 10 minutes and cooled to room temperature until a volatile content of about 20% in the coating was reached, as required by claims 1-6, 21-22, 25 and 26 (col. 10 and 11, lines 66-2). The clear coat composition was then coated onto the coated test piece and dried and cured at 80-90 degrees C for 30 minutes, as required by claims 7, 8, 23 and 24-26 (col. 11, lines 1-8).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to heat the basecoat and clearcoat films to adjust the volatiles content to 3-10% by weight, to employ the average drying rates of 1-40% by weight/minute and to adjust the temperature to 50-35 degrees Celsius, as required by claims 1, 3, 5, 7 and 21-26. One would have been motivated to employ the drying percentages and average drying rates required because Hintze-Bruning and Fujii teach drying of both the basecoat and clearcoat at various temperatures in the same ranges as provided in the appellant's specification. Since the drying temperature is one parameter that can be changed for various embodiments of the inventions and directly affect the volatile contents weight percentage and the drying rate, the volatile contents weight percent of the dried film and drying rates are considered to be cause effective variables. It is well settled

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that the determination of optimum values of cause effective variables such as the volatile contents weight percentage of the dried films and drying rates is within the skill of one practicing in the art. *In re Boesch*, 205 USPQ 215 (CCPA 1980).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to cool the basecoat and clearcoat films to a temperature to 50-35 degrees Celsius, as required by claims 1, 4, 6, 8, 25 and 26. One would have been motivated to adjust the basecoat temperature to 35-50 degrees Celsius because Fujii teaches that the basecoat is to be cooled to room temperature, which is understood to be about 30 degrees Celsius. One would have been motivated to adjust the clearcoat temperature after coating to less than 50 degrees Celsius because Fujii teaches letting the coating cool in a chamber at a temperature of -30 degrees Celsius in a preferred example, which is well below the required temperature.

The continuous clearcoating method is not taught by Hintze-Bruning in view of Fujii, as required by claim 12. Also, curing the multilayer sheets after joining with the substrates by thermal curing, as required by claim 18, is not taught.

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to use a continuous method of clearcoating with the process for producing a multilayer sheet taught by Hintze-Bruning in view of Fujii, as required by claim 12. One would have been motivated to make this modification because it is within the level of ordinary skill to operate a process continuously. *In re Dilnot*, 138 USPQ 48 (CCPA 1963).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to modify the process for producing a multilayer sheet taught by Hintze-Bruning in

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view of Fujii to include curing the multilayer sheet after joining with a substrate, as required by claim 18. One would have been motivated to make this modification because the transposition of process steps, where the processes are substantially identical or equivalent in terms of function, manner and result, was held to not patentably distinguish the processes. *Ex parte Rubin*, 128 USPQ 159 (PO BdPatApp 1959).

The protective coating film is not taught by Hintze-Bruning in view of Fujii, as required by claim 9.

Claims 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hintze-Bruning in view of Fujii further in view of Steininger et al. (US 2004/0208998).

Steininger teaches a film made by 2 paint coats which can be cured (abstract). The film can have a reinforcing sheet on one side with adhesive predisposed on it and a carrier film of polypropylene over the clear coat film, as required by claim 9 (0087, Figure 2). The carrier film can insure protection of the paint surfaces until the end product has been produced (0080).

It would have been obvious to a person ordinarily skilled in the art at the time of the invention to modify the process for producing a multilayer sheet taught by Hintze-Bruning in view of Fujii with the polypropylene film over the clear coat taught by Steininger, as required by claim 9. One would have been motivated to make this modification because Hintze-Bruning and Steininger teach similar films for use in coating motor vehicles that are stretchable teaches and Steininger specifically teaches that the improved film can significantly reduce factory standing times and eco-friendliness.

(10) Response to Argument

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A. 1. a.

Appellant's arguments filed February 09, 2010 have been fully considered but they are not persuasive. In response to appellant's argument that there is no suggestion to combine the references, the examiner recognizes that obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art. See *In re Fine*, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). In this case one would be motivated to combine Hintze-Bruning with Fujii because both teachings are drawn to coatings to be used for body panels of motor vehicles which have no solvent or a low solvent content due to environmental concerns. Fujii teaches the advantage that its method is better than a two coat one bake method, which is the type of method taught by Hintze-Bruning, because it provides surface smoothness, distinctness of image gloss and weatherability better than such a coating (Fujii col. 1, lines 52-60).

In response to appellant's argument that the references are not combinable because Hintze-Bruning teaches a film forming method for making a sheet and Fujii teaches a direct application method to the substrate, the fact that appellant has recognized another advantage which would flow naturally from following the suggestion of the prior art cannot be the basis for patentability when the differences would otherwise be obvious. See *Ex parte Obiaya*, 227 USPQ 58, 60 (Bd. Pat. App. & Inter. 1985). In this case, it would be obvious to a person ordinarily skilled in the art to modify a direct application method to make a sheet instead because a sheet containing the coating composition could be easily applied to the substrate or could be

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attached to a substrate which can be molded into the desired part at a latter time and may be used for a plurality of different parts.

Appellant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. In particular, the Appellant states that the process produces unexpected or surprising results. However, the results are not clearly or distinctly shown in the Appellant's specification. Data showing the unexpected results of the claimed process would clearly point out the patentable novelty which the Appellant thinks the claims present in view of the state of the art. In this case, it is of the Examiner's opinion that the "adjusting of the volatiles content" required in the claims is merely the same as drying the respective films to a specific degree. Therefore, it would be obvious to a person ordinarily skilled in the art to obtain the specified volatiles contents simply by optimizing the drying processes.

A. 1. b. i.

Hintze-Bruning teaches that the color and or effect layer is dried or partly or fully cured. Preferably is it dried. Drying may be carried out by using customary and known methods, such as irradiation with IR or microwave radiation or treatment with hot air in countercurrent (Hintze-Bruning, 0103). Therefore, Hintze-Bruning does indeed teach "adjusting a basecoat film to a residual volatiles content of less than 10% by weight" because it is well known that drying of a coating would produce a coating with no residual volatiles content. A clearcoat composition may be added to the cured basecoat (Hintze-Bruning, 0107). Hintze-Bruning also shows that such a clearcoat is well known in the art and examples of such clearcoats are provided.

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Furthermore, Fujii teaches volatile contents of a basecoat of 25% by weight or lower (col. 7, lines 14-26) and specifically 20% in example 4 (Fujii, col. 10-11, lines 65-10). A person ordinarily skilled in the art would arrive at the conclusion that it is advantageous to adjust a volatile contents to be as low as possible for the basecoat.

In regard to the surface temperature limitation of claim 1 and 25, Hintze-Bruning teaches that the thermal curing is advantageously effected at a temperature of above 90 degrees Celsius (Hintze-Bruning, 0123). The examiner does not contend that the specific temperature range of less than 50 degrees Celsius is taught by Hintze-Bruning in view of Fujii. The examiner points to the argument concerning the modification of the references below in regards to the surface temperature limitation.

A. 1. b. ii.

In regards to the volatiles content limitations of claims 1 and 25, the examiner points to the Fujii reference. Fujii teaches volatile contents of a basecoat of 25% by weight or lower (col. 7, lines 14-26). It is well known that clearcoats and basecoats generally operate under similar process parameters. For example, a substrate which uses a very dry basecoat would also require a very dry clearcoat. A person ordinarily skilled in the art would arrive at the conclusion that it is advantageous to adjust a volatile contents to be as low as possible for the basecoat and clearcoat in view of Fujii's teaching of lower than 25% by weight volatile contents.

In regard to the surface temperature limitation of claims 1 and 25, it is taught in Fujii that it is advantageous for a coating composition to be cured at low temperatures of 40 to 120 degrees Celsius (Fujii, (col. 7, lines 14-27). A person ordinarily skilled in the art would attempt to cure the coatings at the lowest possible temperature in this range or an even lower temperature

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because it would require less energy to use a lower drying temperature. Therefore, the modification of Fujii to include as low of a surface temperature as possible would provide the teaching of “adjusting the surface temperature to a temperature of less than 50 degrees Celsius” as required by claims 1 and 25.

A. 2.

In regards to the Appellant’s argument regarding “two distinct drying sections” as it relates to claims 3, 5, 7, 23 and 24, the examiner turns to the teaching of Fujii. Preferably the aqueous coating composition (basecoat) is applied to a plastic substrate by spray coating or the like and then dried in air or hot air until the water content is reduced to about 25% by weight or lower. A transparent topcoat composition is applied. Subsequently the substrate is set in a usual manner and then heated to a temperature of 40-120 degrees Celsius to cure the clear coating or the two coatings at the same time (Fujii, col. 7, lines 14-27). Fujii clearly shows in this teaching that the basecoat and clearcoat are dried separately.

A. 3.

In regards to the appellant’s argument regarding the “curing of a multilayer sheet after joining it with a substrate”, the examiner turns to the teaching of Hintze-Bruning. Hintze-Bruning teaches that the film may be provided with a comparatively thick thermoformable carrier film or adhesion film (i.e. a multilayer sheet) on the side facing away from the clearcoat film (i.e. the back of the film) before they are used to produce coatings. Therefore, it would be obvious to provide such a multilayer coated sheet before the curing takes place since Hintze-Bruning teaches that a multilayer sheet may be formed before the coating.

A. 4.

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In regards to the appellant's argument regarding the use of "chill rolls" to provide temperature adjustments, the examiner turns to the previous comments from A.1.b. ii. in regards to the temperature requirement being taught by Fujii. Appellant's arguments do not comply with 37 CFR 1.111(c) because they do not clearly point out the patentable novelty which he or she thinks the claims present in view of the state of the art disclosed by the references cited or the objections made. Further, they do not show how the amendments avoid such references or objections. In particular, the Appellant states that the process produces unexpected or surprising results. However, the results are not clearly or distinctly shown in the Appellant's specification. Data showing the unexpected results of the claimed process would clearly point out the patentable novelty which the Appellant thinks the claims present in view of the state of the art. In this case, it is of the Examiner's opinion that the use of "a temperature of less than 50 degrees Celsius using chill rolls" required in the claim 25 is merely the same as allowing the coating to cool at a temperature of less than 50 degrees Celsius. It would be obvious to a person ordinarily skilled in the art to use chill rolls because it is well known in the art that chill rolls may be used to cool substrates at temperatures of less than 50 degrees Celsius.

B.

The examiner refers to section A in regards to the Appellant's argument concerning claim 9 due to dependency on claim 1.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/RYAN SCHIRO/

Examiner, Art Unit 1711

April 29, 2010

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